

Comparisons of Job Characteristics

Focus Occupation: Chemical Plant and System Operators (51-8091)

Associated Occupation: Water and Wastewater Treatment Plant and System Operators (51-8031)

Compare Knowledge

Compare Skills

Compare Abilities

Compare Detailed Work Activities

Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 73

Focus Occupation: Chemical Plant and System Operators (51-8091)

Associated Occupation: Water and Wastewater Treatment Plant and System Operators (51-8031)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	14.8	15.1	0	Current knowledge level may be sufficient
Mathematics	9.2	13.5	10.7	<	Expanded education and/or training may be required
Physics	4.3	13.2	7.2	<<	Extensive education and/or training may be required
Public Safety and Security	6.9	12.7	10.5	<	Expanded education and/or training may be required
Chemistry	4.8	12.6	12.2	0	Current knowledge level may be sufficient
Engineering and Technology	5.7	11.1	8.5	<<	Extensive education and/or training may be required
Biology	3.7	10.9	5.2	<<	Extensive education and/or training may be required
Production and Processing	6.0	10.8	17.6	>>	Current knowledge level is likely more than sufficient
Building and Construction	4.0	10.0	5.4	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Chemical Plant and System Operators (51-8091)

Associated Occupation: Water and Wastewater Treatment Plant and System Operators (51-8031)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Operation Monitoring	6.6	11.9	15.9	>>	Skill level is likely more than sufficient

Operation and Control	5.4	11.4	13.6	>	Skill level is likely sufficient
Quality Control Analysis	5.9	10.3	11.5	>	Skill level is likely sufficient
Equipment Maintenance	3.5	9.3	7.1	<<	Extensive development of skills in this area may be required
Troubleshooting	4.5	9.3	6.7	<<	Extensive development of skills in this area may be required
Repairing	3.4	9.0	7.5	<	A higher skill level may be required
Equipment Selection	3.3	7.4	4.8	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Chemical Plant and System Operators (51-8091)

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Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Perceptual Speed	7.4	9.8	11.4	>	Current ability level is likely sufficient
Depth Perception	5.3	8.0	7.3	0	Current ability level may be sufficient
Gross Body Equilibrium	3.2	7.1	6.9	0	Current ability level may be sufficient
Gross Body Coordination	3.9	6.9	6.1	<	Some improvement in abilities may be required
Response Orientation	4.0	6.9	8.8	>	Current ability level is likely sufficient
Wrist-Finger Speed	3.2	5.4	5.9	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Chemical Plant and System Operators (51-8091)

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Work Activities	Exclusivity of Activity
Adjust production equipment/machinery setup	25
Clean equipment or machinery	20
Collect samples for testing	58
Direct and coordinate activities of workers or staff	3
Inspect machinery or equipment to determine adjustments or repairs needed	42
Maintain consistent production quality	50
Maintain or repair industrial or related equipment/machinery	39
Maintain production or work records	19
Monitor production machinery/equipment operation to detect problems	27
Operate chemical processing equipment	77

Operate power driven pumps	66
Test materials or solutions	73
Use precision measuring tools or equipment	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 69

Focus Occupation: Chemical Plant and System Operators (51-8091)

Associated Occupation: Water and Wastewater Treatment Plant and System Operators (51-8031)

Tools and Technologies	Exclusivity
Air circulation and parts and accessories	40
Computers	1
Conveyors and accessories	18
Gas analyzers and monitors	10
Indicating and recording instruments	2
Industry specific software	1
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Pumps	9
Separators	62
Water treatment and supply equipment	21

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.